

**WHAT IS CLAIMED IS:**

1. A method for selecting encoding parameters for the transmission of media objects from a processing device over a communications network, the method comprising the steps of:

5 determining a play duration value for a media object to be transmitted over the communications network;

determining a bandwidth value for transmitting said media object over the communications network;

10 receiving a first input indicative on a deadline time value in which said media object must be transmitted over the communications network;

calculating a plurality of encoding time values, each reflective of the time to encode said media object using one of a plurality of resolution and frame rate combinations;

15 calculating a plurality of bit rates, each corresponding to one of said plurality of encoding time values, using said play duration value, said bandwidth value and said deadline time value; and

20 receiving a second input indicative of a selection of one of said plurality of bit rates, wherein said media object is transmitted over the communications network using one of said plurality of resolution and frame rate combinations corresponding to said selected bit rate.

2. The method of Claim 1, wherein said bandwidth value is determined by querying a network adaptor located within the processing device.

3. The method of Claim 1, wherein said bandwidth value is determined by receiving a third input from a user via a graphical user interface on the processing device.

4. The method of Claim 1, further comprising the step of:

5 determining a cost value associated with said bandwidth value, wherein a user may base the selection of one of said plurality of bit rates, received as said second input, on said cost value.

5. The method of Claim 1, further comprising the steps of:

receiving at least a third input indicative of metadata associated with said  
10 media object; and

linking said metadata with said media object, wherein said metadata is transmitted with said media object over the communications network.

6. The method of Claim 1, further comprising the steps of:

sorting said plurality of bit rates according to quality;

15 presenting a subset of said plurality of bit rates in sorted order to a user; and

receiving said second input from said user indicative of a selection of one of said subset of said plurality of bit rates.

7. The method of Claim 1, wherein said step of calculating said plurality of encoding time values comprises the steps of:

accessing a data store containing a plurality of historical encode time values, each corresponding to one of said plurality of resolution and frame rate combinations;

5 and

calculating each of said plurality of encoding time values using the equation:

$$T_h * D;$$

wherein  $T_h$  is one of said plurality of historical encode time values corresponding to one of said plurality of resolution and frame rate combinations; and

10  $D$  is said play duration value.

8. The method of Claim 7, wherein each of said plurality of historical encode time values and said play duration value are measured in seconds.

9. The method of Claim 7, further comprising the steps of:

encoding said media object using one of said plurality of resolution and frame rate combinations corresponding said selected bit rate; and

15

and updating said  $T_h$  value corresponding to said one of said plurality of resolution and frame rate combinations.

10. The method of Claim 1, wherein said step of calculating said plurality of bit rates comprises the step of:

calculating each of said plurality of bit rates, each corresponding to one of said plurality of resolution and frame rate combinations, using the equation:

5 
$$((T_d - T_c) - T_e) * P/D;$$

wherein  $T_d$  is said deadline time value;  $T_c$  is the current time;  $T_e$  is one of said plurality of encoding time values corresponding to said one of said plurality of resolution and frame rate combinations;  $P$  is said bandwidth value; and  $D$  is said play duration value.

10 11. The method of Claim 10, further comprising the steps of:  
rendering a preview clip of said media object;  
determining a play duration value for said preview clip; and  
calculating each of said plurality of bit rates using both said play duration  
value for said media object and said play duration value for said preview clip, wherein  
15 said preview clip is transmitted with said media object over the communications  
network.

12. A system for automatically selecting encoding parameters for the transmission of media objects, the system comprising:

a database for storing a plurality of encoding time values corresponding to a plurality of resolution and frame rate combinations, and a plurality of bit rates each  
5 corresponding to one of said plurality of resolution and frame rate combinations; and

a processing device, comprising:

a network adapter connected to a communications network; and

a processor, wherein said processor is configured to perform the steps  
of:

10 determining a play duration value for a media object to be transmitted over said communications network;

determining a bandwidth value for transmitting said media object over said communications network;

15 receiving an input indicative on a deadline time value in which said media object must be transmitted over said communications network;

calculating said plurality of encoding time values, each reflective of the time to encode said media object using one of a plurality of resolution and frame rate combinations;

20 calculating said plurality of bit rates, each corresponding to one of said plurality of encoding time values, using said play duration value, said bandwidth value and said deadline time value; and

selecting one of said plurality of bit rates, wherein said media object is transmitted over said communications network using one of said plurality of resolution and frame rate combinations corresponding to said selected bit rate.

13. The system of Claim 12, wherein said bandwidth value is determined  
5 by querying said network adaptor.

14. The system of Claim 12, wherein said communications network comprises at least a portion of the Internet.

15. The system of Claim 12, wherein said communications network comprises at least a portion of the PSTN.

10 16. A computer program product comprising a computer usable medium having control logic stored therein for causing a computer to selecting encoding parameters for the transmission of media objects from a processing device over a communications network, said control logic comprising:

first computer readable program code means for causing the computer to  
15 determine a play duration value for a media object to be transmitted over the communications network;

second computer readable program code means for causing the computer to determine a bandwidth value for transmitting said media object over the communications network;

20 third computer readable program code means for causing the computer to receive a first input indicative on a deadline time value in which said media object must be transmitted over the communications network;

fourth computer readable program code means for causing the computer to calculate a plurality of encoding time values, each reflective of the time to encode said media object using one of a plurality of resolution and frame rate combinations;

5 fifth computer readable program code means for causing the computer to calculate a plurality of bit rates, each corresponding to one of said plurality of encoding time values, using said play duration value, said bandwidth value and said deadline time value; and

sixth computer readable program code means for causing the computer to receive a second input indicative of a selection of one of said plurality of bit rates,  
10 wherein said media object is transmitted over the communications network using one of said plurality of resolution and frame rate combinations corresponding to said selected bit rate.

17. The computer program product of Claim 16, wherein said bandwidth value is determined by querying a network adaptor located within the processing  
15 device.

18. The computer program product of Claim 16, wherein said bandwidth value is determined by receiving a third input from a user via a graphical user interface on the processing device.

19. The computer program product of Claim 16, further comprising:  
20 seventh computer readable program code means for causing the computer to determine a cost value associated with said bandwidth value, wherein a user may base the selection of one of said plurality of bit rates, received as said second input, on said cost value.

20. The computer program product of Claim 16, further comprising:

seventh computer readable program code means for causing the computer to receive at least a third input indicative of metadata associated with said media object; and

5 eighth computer readable program code means for causing the computer to link said metadata with said media object, wherein said metadata is transmitted with said media object over the communications network.

21. The computer program product of Claim 16, further comprising:

seventh computer readable program code means for causing the computer to  
10 sort said plurality of bit rates according to quality;

eighth computer readable program code means for causing the computer to display a subset of said plurality of bit rates in sorted order to a user; and

ninth computer readable program code means for causing the computer to receive said second input from said user indicative of a selection of one of said subset  
15 of said plurality of bit rates.



22. The computer program product of Claim 16, wherein said fourth computer readable program code means comprises:

seventh computer readable program code means for causing the computer to access a data store containing a plurality of historical encode time values, each  
5 corresponding to one of said plurality of resolution and frame rate combinations; and

eighth computer readable program code means for causing the computer to calculate each of said plurality of encoding time values using the equation:

$$T_h * D;$$

wherein  $T_h$  is one of said plurality of historical encode time values  
10 corresponding to one of said plurality of resolution and frame rate combinations; and  
 $D$  is said play duration value.

23. The computer program product of Claim 22, wherein each of said plurality of historical encode time values and said play duration value are stored in seconds.

15 24. The computer program product of Claim 22, further comprising:

ninth computer readable program code means for causing the computer to encode said media object using one of said plurality of resolution and frame rate combinations corresponding said selected bit rate; and

tenth computer readable program code means for causing the computer to  
20 update said  $T_h$  value corresponding to said one of said plurality of resolution and frame rate combinations.

25. The computer program product of Claim 16, wherein said fifth computer readable program code means comprises:

seventh computer readable program code means for causing the computer to calculate each of said plurality of bit rates, each corresponding to one of said plurality of resolution and frame rate combinations, using the equation:

$$((T_d - T_c) - T_e) * P / D;$$

wherein  $T_d$  is said deadline time value;  $T_c$  is the current time;  $T_e$  is one of said plurality of encoding time values corresponding to said one of said plurality of resolution and frame rate combinations;  $P$  is said bandwidth value; and  $D$  is said play duration value.

26. The computer program product of Claim 25, further comprising:

eighth computer readable program code means for causing the computer to render a preview clip of said media object;

ninth computer readable program code means for causing the computer to determine a play duration value for said preview clip; and

tenth computer readable program code means for causing the computer to calculate each of said plurality of bit rates using both said play duration value for said media object and said play duration value for said preview clip, wherein said preview clip is transmitted with said media object over the communications network.